

# GPS Safety Summary 1,3-dichloro-5-nitrobenzene

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## 1. General Statement

1,3-dichloro-5-nitrobenzene is a powder, crystals or flakes solid off white or yellow or brown in colour, odourless solid Combustible substance, poorly flammable. Practically insoluble in water. Acute or chronic health hazards result from the substance. The substance is hazardous to the aquatic environment.

# 2. Chemical identification.

Name : 1,3-dichloro-5-nitrobenzene

CAS number(s) : 618-62-2 EC number : 210-557-3 Molecular formula : C6H3Cl2NO2

Structure :

## 3. Uses and Benefits

This substance has an industrial use resulting in manufacture of another substance (use of intermediates).

# 4. Physical / chemical properties

Property	Value	
Physical state :	Solid	
Colour :	Orange to brown	
Odour :	Odourless	
рН :	No data available	
Melting point :	65 °C	
Boiling point :	250 °C (1013 hPa)	
Flash point :	140 °C	
Density:	11500 kg/m3	
Solubility in Water:	0.005 g/100ml	

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## 5. Health Effects

Effect Assessment	Result
Acute toxicity (Oral / inhalation / dermal )	Harmful if swallowed.
Irritation / corrosion Skin / eye/ respiratory tract	Causes serious eye irritation
Respiratory or skin sensitisation	NA
Toxicity after repeated exposure Oral / inhalation / dermal	May cause damage to organs through prolonged or repeated exposure
Genotoxicity / Mutagenicity	NA
Carcinogenicity	NA
Toxicity for reproduction	NA

## **6. Environmental Effects**

Effect Assessment	Result
Aquatic toxicity	Yes
Fate and behavior	Result
Persistence and degradability	Not readily biodegradable in water.
Bioaccumulative potential	Low potential for bioaccumulation (Log Kow < 4).

## 7. Exposure

#### Human health

1,3-dichloro-5-nitrobenzene is Harmful if swallowed, Toxic if inhaled, May cause damage to organs through prolonged or repeated exposure. Symptoms of vasodilation and reflex tachycardia may present following organic nitrate overdose; most organic nitrates are extensively metabolised by hydrolysis to inorganic nitrites. Organic nitrates and nitrites are readily absorbed through the skin, lungs, mucosa and gastro-intestinal tract. The exposure must be kept as minimum as possible by the use of appropriate risk management measures suitable collective and personal protective equipment, good industrial hygiene practices and risk communication through appropriate training of workers. Careless handling or accidental spillage of the chemical could result in exposure to potentially hazardous levels of chemicals. Industrial workers should ensure that they follow the advice found in the extended safety data sheet (SDS).

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## **Environment**

Care should be taken to avoid releases of these products to sewage, drainage systems and water bodies. Spillage shall be quickly collected in the event of an accidental release. More information about release measures and accidental release measures are available in the extended safety data sheet.

## 8. Risk Management Recommendations

#### **Human health measures**

Organizational	A basic standard of occupational hygiene is recommended. Ensure operatives are well informed of the hazards and trained to minimise exposures. Ensure regular inspection and maintenance of equipment and machines. Handle and store according to the indications of the Safety Data Sheet.		
Protection	Eye protection:	Safety glasses (EN 166). In case of dust production: protective goggles (EN 166)	
	Skin and body protection:	Protective clothing (EN 14605 or EN 13034)	
	Respiratory protection:	Dust production: dust mask with filter type P2	
Engineering controls	Ensure good ventilation of the work station.		
Environment protective measures			
Avoid release to the environment.			

#### 9. First-aid measures

**First-aid measures after inhalation:**Remove victims into fresh air. In case of respiratory problems, consult a doctor/medical service.

**First-aid measures after skin contact:**If possible, wipe up/dry remove chemicals.Then rinse/shower immediately with (lukewarm) water.If irritation persists, consult a doctor/medical service.

**First-aid measures after eye contact:**Rinse immediately with plenty of water. Remove contact lenses, if present and easy to do.Continue rinsing. If irritation persists, consult a doctor/medical service.

**First-aid measures after ingestion**: Rinse mouth with water. Immediately consult a doctor/medical service. Do not wait for symptoms to occur to consult the Poison Center.

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## 10. Fire-fighting measures

## Extinguishing media

**Suitable extinguishing media:**Quick-acting ABC powder extinguisher. Quick-acting BC powder extinguisher. Quick-acting class B foam extinguisher. Quick-acting CO2 extinguisher. Class B foam (not alcohol-resistant).

**Unsuitable extinguishing media :**Water (quick-acting extinguisher, reel); risk of puddle expansion. Water; risk of puddle expansion.

Special hazards arising from the substance or mixture

**Hazardous decomposition products in case of fire:**On burning: release of toxic and corrosive gases/vapours (nitrous vapours, hydrogen chloride, carbon monoxide - carbon dioxide).

## Advice for firefighters

**Precautionary measures fire :**Exposure to fire/heat: keep upwind. Exposure to fire/heat: consider evacuation. Exposure to fire/heat: have neighbourhood close doors and windows.

**Firefighting instructions:** Dilute toxic gases with water spray. Take account of environmentally hazardous firefighting water. Use water moderately and if possible collect or contain it.

## 11. Accidental release measures

**Protective equipment**: Gloves (EN 374). Safety glasses (EN 166). Protective clothing (EN 14605 or EN 13034). Dust cloud production: self-contained breathing apparatus (EN 136 + EN 137).

**Environmental precautions:** Prevent soil and water pollution. Prevent spreading in sewers.

**For containment :** Contain released product, collect/pump into suitable containers. Plug the leak, cut off the supply.Dam up the solid spill. Knock down/dilute dust clouds with water spray. Powdered form: no compressed air for pumping over spills.

## 12. Disposal consideration

**Regional legislation (waste)**: Disposal must be done according to official regulations.

Waste treatment methods: Dispose of contents/container in accordance with licensed collector's sorting instructions.

**Sewage disposal recommendations**: Disposal must be done according to official regulations.

## 13. Handling and storage

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Precautions for safe handling: Avoid raising dust. Keep away from naked flames/heat. In a finely divided state: use spark/explosionproof appliances. Finely divided: keep away from ignition sources/sparks. Carry operations in the open/under local exhaust/ventilation or with respiratory protection. Comply with the legal requirements. Clean contaminated clothing. Keep the container tightly closed. Do not discharge the waste into the drain. Powdered form: no compressed air for pumping over.

**Hygiene measures**: Observe normal hygiene standards.

## 14. Classification and Labeling

Hazard pictograms (GHS US)

Hazard statements (GHS US)

Signal word (GHS US) : Warning

H319 - Causes serious eye irritation Precautionary statements (GHS US)

: P264 - Wash hands, forearms and face thoroughly after handling.

: H302 - Harmful if swallowed

P270 - Do not eat, drink or smoke when using this product.

P280 - Wear protective gloves/protective clothing/eye protection/face protection.

P301+P312 - If swallowed: Call a poison center or doctor if you feel unwell.

P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove

contact lenses, if present and easy to do. Continue rinsing.

P330 - Rinse mouth.

P337+P313 - If eye irritation persists: Get medical advice/attention.

P501 - Dispose of contents/container to hazardous or special waste collection point, in

accordance with local, regional, national and/or international regulation.

## 15. Conclusion

1,3-dichloro-5-nitrobenzene is a powder, crystals or flakes solid off white or yellow or brown in colour, odourless solid Combustible substance, poorly flammable. Practically insoluble in water. Acute or chronic health hazards result from the substance. The substance is hazardous to the aguatic environment. Care should be taken to avoid releases of these products to sewage, drainage systems and water bodies. The exposure must be kept as minimum as possible by the use of appropriate risk management measures as suitable collective and personal protective equipment, good industrial hygiene practices and risk communication through appropriate training of workers.

## 16. Contact Information within company

#### Manufacturer

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This GPS safety summary is intended to give general information about the health, safety and environment and not intended to provide in-depth details. To obtain the most accurate and current information, consult the appropriate Safety Data Sheet (SDS) prior to use of the material named herein.